To: Studies & Plans Squads PPM 10-13

From: Dave Bayler Revised: Kevin Trapp

Subject: Field Checks

Date: August 18, 1994 Revision Date: October 13, 2009

# **PLAN PREPARATION MEMORANDUM 10-13**

#### **BACKGROUND**

This memorandum supersedes Plan Preparation Memorandum 97.246P, Checklists, and 90.223P, its attachments and supplements Section 6306 and Section 12-3 of the BDE Manual in providing Plan Preparation Checklists and Checklists for Phase I Reports, respectively.

Read the Plan Review Committee Report and note the recommendations. The District is committed to following these recommendations.

The major impact to Studies and Plans is that extra time is required between finishing the plans and PS&E submittal date. Two weeks for the Estimator, two weeks for other bureaus to review, and two weeks for Project Engineer review means that we will now need to have plans done six (6) weeks before the PS&E date.

Work toward this goal with all lettings. I am hopeful that all squads could meet this schedule. Discuss exceptions with your Project Engineer.

I realize that this shortens your preparation time on an already tight schedule. However, the changes, addendums, and other re-work will be lessened due to more thorough review.

Regarding communication with the Resident, please don't be offended by criticism of the plans. The greater portion of the plans, i.e., that portion with no problems, will probably not be on the Resident's mind. What consumes his/her time are the problems and that's what you'll hear about. Ask what worked well. Try to arrange a visit during construction of larger jobs if possible.

Quality plans submitted in a timely manner is everyone's goal. Hopefully, these recommendations will assist District five's attainment of that goal.

## **PROCEDURE**

Following are Plan Preparation Checklists which should be utilized in conjunction with Chapter 12 & Chapter 63 of the BDE Manual to improve quality and consistency of project report and plans. The various checklists should be completed by the respective bureaus during Other Bureau Review and placed in the project section File for future reference.

# **PLAN REVIEW COMMITTEE**

**FINAL REPORT** 

**JUNE 06, 1994** 

**REVISED JULY 08, 1994** 

**COMMITTEE MEMBERS** 

DEAN A. BARBER WILLIAM J. PINE BRIAN K. TRYGG PURPOSE OF INVESTIGATION – The plan review committee was assembled by Ray Stanfield on January 24, 1994. The committee members were asked to look into our current procedures for field checks and plan reviews.

STATUS OF INVESTIGATION – The plan review committee presented it's final report on July 07, 1994 to the following individuals:

Lynn Forbes – District Engineer
Ray Stanfield – Project Implementation Engineer
Phil Tegeler – Program Development Engineer
Jerry Cearlock – Construction Engineer
Dave Bayler – Studies & Plans Engineer

This revised report contains the recommendations agreed to during that presentation. It is intended that these items be incorporated into our current plan preparation and plan review processes.

FIELD CHECKS – "Plan in hand field checks" are often done when the plans are 90% to 100% complete and are nearing the required submittal date. This leaves the designers little time to incorporate changes suggested during the review.

The committee suggests that a field check be held during the study phase of the project. For projects not requiring a project report the committee recommends that a field review be held at the beginning of the design phase. A good time for the first field check would be soon after the early involvement meeting. A second field check should be held only for "major" projects. This field review should be held when the plans are approximately 50% complete.

Added to Report by Studies and Plans

"Major" projects are defined as"

1. Urban Sections

Except: A. Straight Resurfacing

B. Traffic Signal JobsC. Individual Intersection Improvements, Etc.

2. Interstate Projects

Except: A. Patching

B. Bridges

C. Shoulder Seal, Etc.

Note: The FHWA wants to attend interstate plan-in-hand field checks.

3. New Alignments

- 4. Freeway Type Projects (Rural two-lane to four-lane)
- 5. Large or Complicated Bridges
- 6. Controversial or Politically Sensitive Projects
- 7. Others as Designated. Consult Project Engineer

The committee recommends that the designer assemble the following items for the initial field reviews:

Existing typical cross-sections Suggestions for the proposed typical cross-sections Summary of existing problems and scope of project

PLAN REVIEWS – Plan reviews are often done near the date that the plans are submitted to Springfield and the designers do not have the time to properly incorporate the reviewer's requests into the plans.

The committee recommends that plans be sent out for review after they are 100% complete and have been reviewed by the project engineer. The committee also recommends that plans be completed and sent out for review two weeks prior to the date they are due to the District estimator. This would allow a reasonable amount of time for review and revision.

The committee realizes that this is merely stating the obvious and that the designers face many obstacles in the process of trying to complete a set of plans. However, if the district makes the commitment in terms of man-hours to meet this schedule, the committee recommends the other bureaus be required to complete their reviews in one week. The designers would then have one week to incorporate suggestions into the plans. The other bureaus should be instructed to honor that commitment by not bringing further changes forward during that last week.

The committee recommends that groups of individuals responsible for reviewing plans develop checklists to use while they are performing their reviews. We believe the checklists will prove to be an invaluable tool in performing consistent and thorough plan reviews. The field engineers in construction have developed a checklist for their use. The materials section is developing a checklist. The project engineers in program development have a checklist to use and we recommend that they update that checklist. Operations is developing their checklists.

The checklists will be compiled and furnished to design so that the designers may use them in their own review of their plans.

#### **RELATED TOPICS**

STAY INVOLVED – The earlier the designers become aware of questions or concerns about a particular project the easier it is for them to address those problems in the plans. We suggest that we as individuals concentrate on staying involved in the early stages of projects. We encourage the bureau chiefs to discuss the multi-year program with the programming engineer. We encourage the construction engineer and the materials engineer to attend coordination meetings, project monitoring meetings, and other functions as much as possible. We encourage the construction and operations field engineers and the mixtures control engineer to stay in contact with designers about specific problems during the design phase.

FEEDBACK – Some of the younger designers have noted that they don't feel like they receive ample feedback from the field about their plans. We have evaluation forms for the plans from the resident engineer but these do not appear to fully illustrate what worked well and not so well on a set of plans.

The committee recommends that residents and designers be encouraged to stay in more frequent contact about the status of projects and how the plans are working. Residents need to keep designers informed of what types of changes are being made on projects so that future plans can be improved. Designers need to visit the jobsites to see how the projects are developing.

There is no better way to improve the quality of our plans than through open constructive communication between field and office personnel.

#### SUMMARY

#### FIELD CHECKS

- During project report or beginning of design work if no project report
- Second field check at 50% plan completion for major projects

## **PLAN REVIEWS**

- Plans 100% complete and reviewed by project engineer
- Plans out two weeks before due to estimator
- Comments required back in one week
- Leave designers alone during last week
- · Utilize checklists for plan reviews

#### STAY INVOLVED

Individuals must concentrate on staying involved in the early stages of projects

#### **FEEDBACK**

Maintain open, constructive communication between designers and residents

## AGENDA FOR STUDY PHASE FIELD CHECK

- I. Assignment of person to take minutes and provide copies of same to all persons invited to the field check.
- II. Introductions of persons attending.
- III. Review agenda for any required revisions.
- IV. Plan Review
  - A. Anticipated Letting Date
  - B. General description of improvements including scope of project, i.e., 3P, 3R, SMART, Etc.
  - C. Existing typical cross sections
  - D. Suggestions for proposed typical cross sections
  - E. Discussion of proposed plans and other options considered
  - F. Concerns of Other Bureau and Outside Agencies
    - 1. Pavement Structure
    - 2. Drainage
    - 3. Property owner complaints
    - 4. Erosion problems
    - 5. Geometric concerns
    - 6. Other comments
  - G. Summary of existing problems
  - H. Utilities
  - I. General questions or comments
- V. On-Site Inspection

## AGENDA FOR PLAN-IN-HAND FIELD CHECK

- I. Assignment of person to take minutes and provide copies of same to all persons invited to the field check.
- II. Introductions of persons attending.
- III. Review agenda for any required revisions.
- IV. Plan Review
  - A. Proposed Letting Date
  - B. General description of improvements including type, i.e., 3R, 3P, SMART, Etc.
  - C. Typicals
  - D. Plan Sheets
  - E. Cross Sections
  - F. Detours
  - G. Soils Report
  - H. Utilities
  - I. Possible Special Problems
    - 1. High Accident Locations
    - 2. Drainage
    - 3. Entrances
    - 4. Intersections
    - 5. Structures
    - 6. Proposed Right-of-Way
    - 7. Commitments
    - 8. Environmental Concerns
    - 9. Other
  - J. Questions or comments
- V. On-Site Inspection

To: D. Clark

From: Program Development – Studies & Plans

Subject: <u>SCOPING/PLAN-IN-HAND</u> Field Check

Date: <u>CURRENT DATE</u>

A <u>scoping/plan-in-hand</u> field check will be held for the subject section on <u>DATE</u> at <u>TIME</u>. The meeting place for driving is at <u>LOCATION</u>. For those wishing a ride, please contact <u>PERSON</u>. We will be leaving the District Office at <u>TIME</u>.

This job is programmed for <u>(3R IMPROVEMENT/3P/SMART/CULVERT REPLACEMENT/BRIDGE REPLACEMENT/RECONSTRUCTION, ETC.)</u> The job is located <u>(LOCATION)</u>.

Key issues to be resolved include: LIST.

<u>1. ITEM 1</u>

2. ITEM 2

ITEM 3

ETC.

### **INITIALS**

cc: Project Implementation (Construction)

Project Implementation (Materials)

Operations (Traffic)
Project Support Engineer
Studies and Plans Engineer

Program Development Engineer

Programming Engineer Land Acquisition Engineer

**Project Engineer** 

Designer note: Federal Highway and Bureau of Design & Environment representatives

shall be invited to scoping/plan-in-hand field checks involving interstate

projects.

Attach.: Location Map

## **CONTENTS OF RESIDENT ENGINEER'S FOLDER**

Standardized Forms (Those checked are included)

	1. 2. 3. 4. 5. 6. 7. 8.	Computation Sheets Agreements (railroad, municipalities, etc) Utility markups Applicable permits (Operations, Project Support, etc) Commitments Project Report As-built plans if applicable Any special information (e.g. drainage calcs) Other
В.	Memos and Letters	
	<u>Date</u>	Subject
		Resident Engineer is responsible for checking folder contents with this and immediately notifying the Design Engineer of any discrepancies.

A.